From:

"Lantz Indergard" <LIndergard@lisbonvalley.com>

To:

<bethericksen@utah.gov>

Date:

05/23/2008 10:13 AM

Subject: Attachments: Response to Comments
Response to Comments 5-21-08.doc; Final POO Cessationlmi.doc; 2008 Final Bo

nd Estimate DOGM rev1.xls; Dump C Steep Slopes.tif

CC:

<susanwhite@utah.gov>, <paulbaker@utah.gov>, <Rebecca Doolittle@blm.gov>

Hello Beth:

Response to the Division's letter, dated May 2, should be in this morning's UPS to Susan. Please check for this package. It includes:

1. Response to Comments Letter

2. Revised POO

3. Revised Fig 1-4

4. Revised Table 1 and Unit Costs Evaluation Worksheet

5. Small-scale topo of Waste Dump C

6. Photos of hilfiker wall

Electronic versions of all are attached except Fig1-4 and photos due to file size. Plan to deliver hard copy to BLM this afternoon.

I'll be submerged in TRI reporting thru next week, and will be at my desk to answer any questions you may have. Thank you for your attention to this response.

Lantz M Indergard PG

Environmental Manager

Lisbon Valley Mining Co LLC

920 S County Road 313

La Sal, Utah 84530

Phone: (435) 686-9950 #226

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Lindergard@lisbonvalley.com



Ms. Susan White Utah Division of Oil, Gas, & Mining 1594 West North Temple Suite 1210 Salt Lake City, UT 84114-5801 May 21, 2008

Mr. Lynn Jackson US Bureau of Land Management 82 East Dogwood Moab , Utah, 84532

Re: Revised Mine Plan and Bond Adjustment Request. Lisbon Valley Mining Company LLC. 920 South County Road 313, La Sal, Utah, 84530.

Dear Susan and Lynn:

The Lisbon Valley Mining Co LLC (LVMC) respectfully submits this response to our second Plan of Operations (POO) revision and bond adjustment request submitted April 15, 2008, and follow up correspondence, dated April 25, 2008. Our response is formatted in accordance with the Division's comments received May 6, 2008.

Attachments to this response include:

- 1. Plan of Operations (POO) Rev.3
- 2. Fig 1-4
- 3. Table 1
- 4. Unit Costs Evaluation Worksheet
- 5. Small-scale topo of Waste Dump C
- 6. Photographs of the hilfiker wall

Safety Fences/Berms around Pits

Fence Cost

1.50/ft is the escalated labor rate for 4-strand barbed wire fencing using local rancher. LVMC has been using this contractor for 3 yrs. Materials are stockpiled on-site.

Fence Design

4-strand barb wire fence is the common design on private, State, and BLM lands in Lisbon Valley.¹

Berm Design

Safety berms are constructed using selected local fill containing boulders with objective to prevent public access using vehicles. Design berm height is 4 feet on flat grades. There are two locations were berms are planned to prevent public access to the Sentinel West Pit from jeep roads on top of the east rim of Lisbon Valley. These are shown on Fig 1-4. Berms will be approx 75 in length. This comprises <100 yds of fill, and there is plenty of rocky scrub at these locations. No plans to revegetate the berms due to the rock content.

Present Fencing and Berms Configuration

Fencing and cattle guards are presently in place preventing cattle and public access to both Centennial and GTO pits. Berms also exist around the Centennial Pit as part of the existing haul roads. The present fencing configuration was jointly developed in consultation with Wilcox Ranches, and was approved by the BLM prior to construction. Its configuration was designed with two objectives, 1) keep cattle off of reseeded areas and 2) prevent public access using vehicles. The present fencing and berms configuration has been added to Fig 1-4 (attached).

Final Fencing Configuration

The final fencing configuration will add fencing and berms around the Sentinel Pits. The objective is to prevent public access using vehicles. Fences will be tied to the rimrock on both sides of the pits at rugged locations, preventing vehicle access. Two remote jeep roads will be bermed on top of the valley rim east of the Sentinel West Pit. Additional signs will be posted along the east boundary of the Sentinel Pits when the berming is complete. Figure 1-4 shows the future fencing configuration as a separate layer from the existing fencing.

The existing fencing, combined with additional fencing and berms around the Sentinel Pits will adequately address both cattle and public safety issues. Fencing the entire perimeter of all pits is not necessary, and is not practical. This is due to the steep sandstone benches that both prevent access and require portable drilling rig for fence post installation.

¹ Typical Barbed Wire Fence http://www.blm.gov/nstc/eng/draw/pdf/02824-1.pdf

The latter assessment is based on 3 yrs of mine operation and Record of Decision (ROD). "There have been no known instances of public safety issues associated with the unbermed, unfenced, and unsigned pits that existed on the site for over 20 years" prior to mine construction.²

Waste Dumps

The bench widths range from 50-90 feet on the steep slopes of Waste Dump C. Bench heights range from 40-70 feet. Angle of repose ranges from 37-40 degrees. The attached figure details the as-built dimensions. Contour interval = 5 ft.

The waste dumps will be contoured with slopes ranging from 2.5/1 to 3/1. There are 3 objectives.

- 1. Blend the dumps with surrounding topography to the extent possible. This necessarily involves multiple slope angles.
- 2. Provide surface drainage where practical (i.e. existing haul road @ center of Dump C).
- 3. Provide slope breaks, rip rap, and boulders wherever possible.

These objectives will positively assist with erosion control by breaking up and reducing concentrated flows along with related sediment velocities. Reducing sediment velocities drops sediment and reduces erosion. As vegetation begins to take hold, erosion will be further reduced and slopes will become fully stabilized.

Rental rates source is Wheeler Cat in Salt Lake.³

Response to "General comments regarding rates"

Clarification

The Unit Cost Evaluation Worksheet (the worksheet) is an attachment to Table 1. Table 1 and attached worksheet were submitted electronically to DOGM on April 11. Hard copy was received by DOGM April 15. The same information was presented during the meeting on April 18. A follow-up revision to this worksheet and table were submitted by email on April 25.

The worksheet is referenced on page 41 of the POO. Table 1 and the worksheet were both titled. Table 1 was entitled Table 1 2008 Interim Bond Estimate and Cash Flow Analysis Rev.1, Lisbon Valley Mining Co, La Sal Utah. The worksheet was entitled Interim Reclamation Plan Unit Costs Evaluation Worksheet 4/10/08.

² US Bureau of Land Management 1997. Final Record of Decision Environmental Impact Statement Lisbon Valley Copper Project. 26 March 1997.

³ http://www.wheelercat.com/

Additional information to support the 0.42/yd cost for dozing Dump B.

The worksheet derived a unit cost of 0.42/yd for grading Dump B as follows. The rental rate for the D10 is 375/hr (Cell G4). This rate is fully loaded rate includes rental, taxes, fuel and operator (Cell G2). The cost per yard [0.42/yd (Cell Y4)] is derived from total yards of cut (Cell S4), dozing distance (Cell T4), hrly production (Cell V4), total hours (Cell W4), and total cost (Cell X4).

Worksheet Revision #1

In response to this comment, the worksheet has been revised. The revision adds three columns to the worksheet for rental, fuel, and operator (Cells G4, H4, I4). The revised worksheet is entitled Interim Reclamation Plan Unit Costs Evaluation Worksheet Rev.1 (the revised worksheet).

The revised worksheet is attached.

Additional information to support the 0.17/yd cost for growth media Dump B.

Growth media placement on Dump B is 0.19/yd.⁴ CAT scraper unit cost is 270/hr (Cell J6). This cost is detailed on the revised worksheet using a rental cost of 115/hr, [Cell G6 (18,950/mo plus 6.8% tax/176 hrs/mo)], diesel cost of 105 [Cell H6(30gal/hr@3.50/gal)], and operator [Cell I6 (50/hr)].

Additional information to support the 1.00/yd cost for grading Dump C

Grading on Dump C is divided into three subtasks (lines 10-12, 14). D10 unit cost is 375/hr (Cell J10). This cost is detailed on the revised worksheet using a rental cost of 220/hr, [Cell G10 (36,000/mo plus 6.8% tax/176 hrs/mo)], diesel cost of 105 [Cell H10 30gal/hr@3.50/gal)], and operator [Cell I10 (50/hr)]. The selected unit cost of 1.00/yd is the highest of the four line items for grading on Dump C. These costs range from 0.50/yd (Cells AB11, AB12, and AB14) to 1.00/yd (Cell AB10). All dollar fractions are rounded up.

Additional information to support the 0.56/yd cost for growth media placement on Dump C

⁴ LVMC Email 4-25-08

Growth media placement on Dump C Grading on Dump C is divided into two subtasks (lines 18-19). As described above and expanded in the revised worksheet, the scraper unit cost is 270/hr. There are two unit costs for growth media placement on Dump C. The 0.63/yd unit cost⁵ reflects the short haul afforded by the existing growth media stockpile on top of the dump. The 1.15/yd unit cost reflects the longer haul from the Centennial stockpile.

Equipment mobilization was included in Table 1 (Cells G115, 116, 117, 118).

Ponds

The POO (pgs 38, 43-45) has been revised with an expanded description of evaporation of solution inventory on the pad using high evap sprinklers, followed by pan evaporation and sprinkler evaporation of the ponds. Annual pan evaporation in Lisbon Valley is approx 66in. Annual precip is about as compared with 15in. For this reason evaporation is considered a viable solution inventory reduction process.

Page 38 also references the thickness of growth media (12").

The costs associated with grading and growth media placement @0.51/yd and 0.43/yd respectfully were detailed on the worksheet and are expanded on the revised worksheet.

The grading unit cost is based on reducing the ponds to a 2.5/1 slope. This is an approximate 50,000 yd cut (Cell O37), at an average (downhill) dozing distance much less than 150 feet (Cell W37) resulting in a production rate of 750 yds/hr at 75% efficiency (Cell Y37). The growth media unit cost is based on bringing 23,000 yds of growth media (Cell V38) from the stockpile north of the pad [0.6 mile cycle (Cell Q38)], resulting in a production rate of 625 yds/hr (Cell Y38). These production rates and haul distances support the estimated costs previously and currently submitted.

Heap Leach Pad

Unit costs for heap leach reclamation are detailed on the revised worksheet (lines 24-33). Rental costs, diesel costs, labor costs, haul lengths, cycle times, total hrs, total cost, and cost per yard are detailed. Grading unit cost is 0.20/yd (Cell AB25). Growth media spreading is 0.72/yd (Cells AB26, AB31). Overburden has to be hauled with articulated trucks and loaded with a loader from Waste Dump B (3.2 mile cycle). Unit cost for loading is 1.68/yd (Cell AB28). Unit cost for hauling is 1.71/yd (Cell AB30).

Production rates are driven by the location of soil and overburden stockpiles. The location of overburden and growth media stockpiles are shown on Fig 1-4 using numbers which correspond to the revised worksheet. Please refer to the revised worksheet and Fig 1-4.

⁵ LVMC Email 4-25-08

The POO has been expanded to describe leach rinse process, including duration (pgs 43-45).

Source of water for the rinse is groundwater from LVMC's water system. Approx. quantity is 900,000,000 gallons. This quantity was described in Appendix 2 of the POO.

2.5 lbs/ton was the original estimate used to determine the bond in 1998. It is not clear why the two costs are 10% different, nor is it clear if lime will be used. The cost has been increased to reflect 2.75 lbs/ton.

Approximately 13% of the ore will be neutralized during the rinse.

Nine cells will be reclaimed.

Cell G41 of Table 1 includes 4 laborers at 35k/yr for 1.5 yrs. This labor will be used to move piping and sprinklers.

The spreadsheet cell E39 indicates 1,416,000 tons under the As-Built 2008 column. The spreadsheet cell C39 indicates 5.9 M tons under the 1997 Estimate column.

The cost estimate summary for rinse and drain down are included in revisions to the POO and spreadsheet sent by email 4-25-08. This email was sent as a follow up to comments received during the meeting on 4-18-08, and to reflect current increases in scraper rates.

Per 4-25-08 email:

- Increase scrapers rental rate from 240-270/hr
- Revise POO text to reflect same
- Number the pages in the POO
- Revise spreadsheet to escalate line items rather than totals. This is easier to follow when reading the POO.
- Several minor text changes grammar-related

The current POO includes the above-referenced revisions.

Thicknesses of clay, overburden, and growth media are itemized in cells A49-A54 of the spreadsheet. These same numbers have been added to the POO.

"Final design of the facility" (assume page 38?) is referenced in the context of surface water diversion. Additional surface water diversion channels would have been needed to divert storm water around the leach pad if the mine had expanded to original plan (i.e. Stages 4-5). This is no longer an issue. Surface diversion channels are in place for Stage III, which is the present extent of the leach pad.

The expanded description of reclamation activities in the text was intended to describe how unit costs vary in response to as-built conditions, material stockpiles, and haul distances at the primary facilities. It was not intended to include all material cuts and fills. This was the intended purpose of Table 1. All material estimates are included in Table 1.

The POO text has been revised to inform the reader that volumes per facility, including overburden volumes, are detailed in Table 1.

The narrative referenced "approx 450,000 yds" of grading work and Table 1 references 475,000 yds of grading work. The estimate was recalculated to verify 475,000 as the correct estimate. The POO text has been changed to reflect this correction.

Plant and Crusher Area unit costs have been added to the POO.

The hilfiker wall is a standard 24" welded wire wall. Welded wire mats are used to reinforce, and contain aggregate as a vertical face. The wire mats extend approximately 30 feet into the wall. The hilfiker demolition approach will be described and included in the plant demolition estimate. Photos are attached.

Haul Roads

The POO submitted April 11, 15, and 18 all reference costs for placement of growth media and reseeding

Scrapers are used to spread growth media on haul roads. Reclamation equipment is identified on pg 12 of the POO.

The POO has been revised to identify cubic yards of growth media on haul roads.

Sentinel West Haul road is approximately 4.8 acres.

Erosion of haul roads is addressed by surface water diversion, road design (i.e. composition) and berm design. Presently, there are no erosion issues. Roads and berms contain a large aggregate/boulder fraction. Should erosion become a reclamation issue, it can be addressed during reclamation.

Map

The following revisions have been made to Fig 1-4.

Pits are labeled

Unit Cost Evaluation Worksheet is cross referenced.

There are two very rough jeep roads above the Sentinel West pit that could allow access by jeep for a very motivated individual. These roads will be bermed. The same roads cannot access Sentinel East Pit.

Existing fencing has been added to planned fencing on Figure 1-4.

Cross hatching (steep slopes) is labeled.

Legend colors are revised.

Waste Dump C is no longer cut off

Haul roads planned for reclamation in 2008 are colored red and called out in the legend (17 acres in red).

Please call Lantz Indergard at (435) 686 9950 #226 if additional information is required.

Sincerely,

Lantz Indergard PG Environmental Manager Lisbon Valley Mining Co LLC

Table 1 2008 Interim Bond Estimate and Cash Flow Analysis Rev.1 Lisbon Valley Mining Co La Sal, Utah

Summo USA Corporation- Lisbon Valley Copper Project. Updated to reflect anticipated 06 and 07 disturbance.										Reclamation and Cost E	scalation Schedule	
Based on Details of Final Reclamation - original estimate prepared by The Winters Group 1997	1997 E	Estimate		2008 As-Built Measurement				2008 100.00%	2009 103.20%	2010 106.50%	2011 109.91%	2012 113.43%
ACTIVITY/ACREAGE (ref pg 6 2008 Plan of Operations)	AREA	QUANTITY	AREA	QUANTITY	UNITS	\$/Unit 2008	2008 Cost	Leach Copper	Leach Copper	Begin Rinse in June	Complete Rinse	Reclaim Pad, Ponds & Dump B
Waste Dump A-190 acres (not built) area of top	456,444		0		SY							
area of slope scarify top (flat) area	462,680	456,444	ő	0	SY SY		S -					
12 inches soil on top of dump 12 inches soil on slope		152,148 154,227		0	CY		\$ - \$ -					
seed entire surface Total-waste dump "A" reclamation		190		ō	acre		S - S -					
Waste Dump B- 46 acres							•					
area of the top area of the slope	197,222 258,240		146,500 62,500		SY SY							
grade slopes scarify top (flat) area	0	0 197,222		150,000 146,500	CY SY	0.42 0.08	\$ 62,500 \$ 12,086					\$70,892 \$13,709
12 inches soil on top of dump 12 inches soil on slope		65,741 86,080		48,833 20,833	CY	0.19 0.19	\$ 9,278 \$ 3,958					\$10,524 \$4,490
seed entire surface Total-waste dump "B" reclamation		94	46	,	acre	174.00	\$ 8,004 \$ 95,827					\$9,079
Waste Dump C-93 acres							0.00,00					
area of the top	344,222		127,800		SY							
area of the slope grade slopes	238,633	0	140,000	195,000	SY CY	1.00	\$ 195,000	195,000				
scarify top (flat) area 12 inches soil on top of dump		344,222 114,741		127,800 35,112	SY	0.25 0.63	\$ 31,950 \$ 22,121	31,950	\$22,828			
12 inches soil on slope seed entire surface		79,544 120	93	46,667	CY acre	1.15 174.00	\$ 53,667 \$ 16,182		\$55,384 \$18,700			
Total-waste dump "C" reclamation							\$ 318,919		• / - /			
Rinse Heap- 12%of total ore neutralized; rinsing & evaporation for 18 months (ref. Section, 2008 Plan of Operations)												
Rinse Heap- 12%of total ore neutralized; rinsing & evaporation for 18 months lime (2.75 lbs/ton)x(\$0.025/lb)x(5.9M ton)		5,900,000		1,416,000	ton	0.07	\$ 96,288			\$34,183	\$75,141	
labor, power & pump for draindown & levaporation for 18 months	1	446,640		1	lot	515,520	\$ - \$ 515,520			\$183,014	\$402,303	
Subtotal for heap rinse & evaporation				•			\$ 611,808					
Heap Leach Pad- 190 Acres												
area of the top area of the slope	788,558 441,653		544,696 119,486		SY SY							
prade slopes 12 inches clay/24 inches soil cap on top	0	0 262,590	24	475,000 362,768	CY CY	0.21 0.72	\$ 98,958 \$ 261,193					\$112,246 \$296,265
24 inche crushed rock on top	12 24	147,070 525,180	24 24	79,578 725,535	CY	0.72 1.71	\$ 57,296 \$ 1,240,665					\$64,989 \$1,407,257
24 inch crushed rock on slope 12 inches soil on top	24 12	294,141 262,590	24 12	159,155 181,547	CY	1.71 0.72	\$ 272,156 \$ 130,714					\$308,700 \$148,266
12 inches soil on slope seed entire surface	12	147,070 254	12 137.2	39,825	CY	0.72 174.00	\$ 28,674 \$ 23,873					\$32,524 \$27,078
Subtotal- clay, crushed rock, soil & seeding for leach pad		201	107.2		200	11-4.00	\$ 2,113,528					021,012
Reclamation of Miscellaneous Areas												
Pond Area- 20 Acres grade		0		50.000	CY	0.50	\$ 25,000					\$28,357
raffinate pond- 12 inches soil PLS pond- 12 inches soil		4,853 4,852		4,853 4,852	CY	0.43 0.43	\$ 2,087 \$ 2,086					\$2,367 \$2,367
LS pond- 12 inches soil water runoff pond- 12 inches soil		4,852 8,229		4,852 8,229	CY	0.43 0.43	\$ 2,086 \$ 3,538					\$2,367 \$4,014
seed 4 pond areas Total-Pond Area reclamation		14	20	-,	acre	174.00	\$ 3,480 \$ 38,278					\$3,947
Plant & Crusher Area- 35 Acres												
grade scarify		0 192,889		166,000 170,000	CY SY	0.51 0.25	\$ 84,680 \$ 42,500					\$96,028 \$48,207
apply 12 inches soil seed entire plant area		41,080 26	35 35	56,466	CY	0.51 174.00	\$ 28,798 \$ 6,090					\$32,664 \$6,908
Total- Plant Area Rectamation			•				\$ 162.048					20,022
Haul Roads- 40 Acres scarify		192,889		180.532	SY	0.25	\$ 45,133	22.567				\$25.597
contour apply 12 inches soil		64,296 67,511		167,000 60,117	CY	0.45 0.30	\$ 75,150 \$ 18,035	37,575 9,018				\$42,620 \$10,228
Beed entire area Total- Plant Reclamation Area		40	40	55,111	acre	174.00	\$ 6,960 \$ 145,278	3,480				\$3,947
Power Line Corridor- 84 Acres							0 140,210					
note the power company has requested the line remain		64			acre	n/c	\$-					
Reseed Soil Stockpile Areas- 80 Acres												
Total- Reseed Soil Stock Pile Areas		80	80		acre	174.00	\$ 13,920 \$ 13,920					
Fences & Berms Around Open Pits							4 10,320					
ence around Sentinel Pit 1 fence around Sentinel Pit 2		5,620 2,140		2,356 1,311	LF LF	1.50 1.50	\$ 3,534 \$ 1,987	3,534 1,967				
fence around Centennial Pit fence around GTO Pit		8,980 7,410		0 536	LF LF	1.50	\$ - \$ 804	0 804				
Total - Pit Fences		-,-10		555	-		\$ 6,305					
Surface Drainage Diversion Ditches leach pad area		7.473		3,435	CY	1.25	\$ 4.294					\$4.870
each pao area plant area cusher area		1,595 1,810		1,250 1,250	CY CY	1.25 1.25 1.25	\$ 4,294 \$ 1,563 \$ 1,563					\$1,772 \$1,772
Jump areas Total-Drainage Diversion Ditches		13,668		500	CY	1.25	\$ 625 \$ 8,044					\$709
Water Line							3 0,044					
pratecture 12 inches soil on top seed entire surface		7,582 4,7	4.7	0	CY	1.25 174.00	\$ - \$ 818		818			
Seed entire surface Total-Drainage Diversion Ditches		4.7	4.7		acre	(7 4.0 0	\$ 818		818			
Drill Pads and Boreholes Centennial Recess Drilling		23			pads	350.00	\$ 8,050		,050			
Other Miscollaneous Areas		43			paus	330.00			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			\$56.714
Unier Miscellaneous Areas Direct Costs							50,000					306,714
Mobilization and Demobilization		1		1	lot	81000.00			\$27,864	\$28,756		\$30,625
				1	lot lot	6000.00 6000.00			*** ***	\$3,195 \$3,195		\$3,403 \$3,403
				1	lot	30000.00			\$15,480			\$17,014
Leach Pad & Waste Dumps		combined total of previous items		combined total of previous items			\$ 3,140,082	226,950	\$94,912	\$217,197	\$477,444	\$2,397,324
		combined total of							_	_		
Misc. Surface Areas		previous items		combined total of previous items		400990.00	\$ 418,820	87,811	\$0	\$0	\$0	\$375,455
Total Direct Costs							\$ 3,558,902	\$ 314,761	\$138,256	\$252,343	\$477,444	\$2,827,225
Latination Control								-				
Indirect Costs												
Plant Dismantling assumes no salvage value		1		1	lot	450000.00	\$ 581,504		S	619,315		
Plugging monitoring wells												

Interim Reclamation Pt

Direct Costs	Primary Areas	Work	Facility	Location	Equipment	Rental Rate, including tax, based on 176hrs/mo	Diesel cost/hr	Operator	Loaded equipment rate inci fuel, taxes, & operator	From	ocation To	Objective
	Dump B	Grade	Dump B	6	D10	220	105	50	375	crest	all slopes	Grade all slopes 3 to 1 or 2.5 to 1 depending on surrounding topography
	·	Rip	Dump B	6	D10	220	105	50	375	top	top	Rip top for reveg
		GM Transport	Dump B	8	627	115	105	50	270	8	6	GM to Dump B
		Reseed	Dump B	8								
		Optional GM Transport	Dump B	8	627	115	105	50	270 0	9	6	Additional GM resource if needed
									0			Re-slope NW face 3 to 1. Include breaks in slope to mimic topography. Pu
												overlay map to avoid exposing underlying rim. OK to convert haul road to
	Dump C	Grade	Dump C	1	D10	220	105	50	375	NW crest	NW Toe	the push after volumes are better de
				2								Fill haul road and tie into existing slope. Work with topo overlay to avoid e
		Grade Grade	Dump C Dump C	3	D10	220 220	105	50 50	375 375	South Crest		haul road to drainage.
		Rip and Track Pack	Dump C	3	D10	220	105	50	375	SE Crest SE Slope	SE Slope SE Slope	Grade into existing slope. Include breaks. Rip SE slope at staked intervals
						220	100		5.5	GL GIOPE	OL Diope	Create diversion channel at toe of dump. Tie into Sent haul roads and use
		Grade	Dump C	4	D10	220	105	50	375	South Toe	Retention Basin	retention basin.
		Rip	Dump C	5	D10	220	105	50	375	top	top	Rip top of dump for reveg and/or GM
									0			
		GM Transport	Dump C	5	627	115	105	50	270	5	5	Spread 60,000 yd stockpile laterally on top
		GM Transport	Dump C	5	627	115	105	50	270	25	dump slopes	GM on slopes
		GM Transport Reseed	Dump C Dump C	5	627	115	105	50	270	7	dump slopes	Additional GM resource if needed
		reseed	Dump C									
	Leach Pad	Rinse										
		Labor										
		Grade	Leach Pad	10	D10	220	105	50	375	10	10	Grade slopes
		Cap Placement	Leach Pad	10	627	115	105	50	270	26	10	2' coverage
		Load Waste Rock	Leach Pad	10	980	91	105	50	246 0	6	6	Load hauf trucks
		Waste Placement	Leach Pad	10	740	95	105	50	250	6	10	2 coverage
		GM Placement	Leach Pad	10	627	115	105	50	270	26 & 27	10	1' coverage
		Resead										
		Reserd	Leach Pad	10								
	Misc Areas											
	Pond Area	grade	Ali ponda	11		220	105	50	375			Grade
		GM Placement Reseed	Alt ponds	11	627	115	105	50	270	27	11	GM over pond footprint
		Keseed										
	Plant & Crusher Area	grade	sx	12	D10	220	105	50	075			Grade
	r tain to Crusher 2002	grade	Primary	13		220	105	50	375 375			Push hilfiker wall down to NW. Load 740s for ponds backfill.
		g-000	All (disturbed footprint of SX, maint, lab,		5.0	220	103	30	373			POSITIONAL WAIL COMPLICATIVE. EDGE 7408 FOR PORTOS DECKNIR.
		Rip	truck shop etc)		D10	220	105	50	375	12	13	
												Rip for reveg
			tiock and the	12	627		105	50	270	12	13	Rip for reveg GM over plant area as needed
		Reseed	acce and acc	12	627			50				
		Reseed	THOSE SEEDS	12	627			50		12	13	GM over plant area as needed
	Haui Roads					115	105		270	12 12	13 13	GM over plant area as needed Grade berm from west to east, finish above grade creating northerly draina
	Maul Roads	Reseed Grade Rip	Sent W Haul Rd Sent W Haul Rd	12 14 14	D10			50 50 50		12	13	GM over plant area as needed
	Haui Roads	Grade Rip	Sent W Haul Rd Sent W Haul Rd	14 14	D10 D10	115 220 220	105 105 105	50 50	375 375	12 12 County Rd County Rd	13 13 pit boundary pit boundary	GM over plant area as needed Grade berm from west to east, finish above grade creating northerly draina stope. Use north extent of road as muck for berm around pit to referition being for reverg
	Haul Roads	Grade	Sent W Haul Rd Sent W Haul Rd Sent E Ramp	14	D10 D10	220 220 220	105 105 105	50 50 50	375 375 375	12 12 County Rd County Rd pit	13 13 pit boundary pit boundary Dump C	GM over plant area as needed Grade borm from west to east, firsth above grade creating northerly draina soop. Use north extent of road as muck for berm around pit to retention be into reverge. Grade south portion of road forwards dump, extending toe of Dump C into a
	Maul Roade	Grade Rip Grade Rip Grade	Sent W Haul Rd Sent W Haul Rd Sent E Ramp Sent E Ramp North GTO Haul Rd	14 14 15 15	D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220	105 105 105 105 105 105	50 50 50 50	375 375	12 12 County Rd County Rd	13 13 pit boundary pit boundary	GM over plant area as needed Grade berm from west to east, finish above grade creating northerly draina stope. Use north extent of road as muck for berm around pit to referition being for reverg
	Maul Roads	Grade Rip Grade Rip Grade Rip	Sent W Hauf Rd Sent W Hauf Rd Sent E Ramp Sent E Ramp North GTO Hauf Rd North GTO Hauf Rd	14 14 15 15 16	D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105	50 50 50 50 50 50	270 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C	Clid over plant area as needed Grade berm from west to east, finish above grade creating northerly draina soop. Use north extent of road as much for berm around pit to retention be not revention to retention to the continuous plant professional professional professional professional formula (and towards dump, extending toe of Dump C into a not for many).
	Maul Roads	Grade Rip Grade Rip Grade Rip Place GM	Sent W Haul Rd Sent W Haul Rd Sent E Ramp Sent E Ramp Noth GTO Haul Rd Noth GTO Haul Rd Noth GTO Haul Rd	14 14 15 15 16 16 16	D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 115	105 105 105 105 105 105 105 105	50 50 50 50 50 50 50	375 375 375 375 375 375 375 375 270	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stock. Use north extent of troid as much for berm round pit to reterrition be not revenue for treesing. Grade south portion of road towards dump, extending toe of Dump C into a pit for revening. Grade to the prior treesing of the prior to the prior to the prior treesing.
	Maui Roada	Grade Rip Grade Rip Grade Rip	Sent W Haul Rd Sent W Haul Rd Sent E Ramp Sent E Ramp North CTO Haul Rd North CTO Haul Rd North CTO Haul Rd South CTO Haul Rd	14 14 15 15 16	D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 115 220	105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50	270 375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C	Clid over plant area as needed Grade berm from west to east, finish above grade creating northerly draina slope. Use north extent of road as muck for berm around pit to reterrition be not reterrition of road towards dump, extending toe of Dump C into a np for reveg. Grade south portion of road towards dump, extending toe of Dump C into a np for reven of the contract of the cont
	Maul Roads	Grade Rip Grade Rip Grade Piaca GM Grade Rip	Sent W Haul Rd Sent W Haul Rd Sent W Haul Rd Sent E Rampo North GTO Haul Rd North GTO Haul Rd North GTO Haul Rd North GTO Haul Rd South GTO Haul Rd South GTO Haul Rd South GTO Haul Rd	14 14 15 15 16 16 16 16	D10 D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50	375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stock. Use north extent of troid as much for berm round pit to reterrition be not revenue for treesing. Grade south portion of road towards dump, extending toe of Dump C into a pit for revening. Grade to the prior treesing of the prior to the prior to the prior treesing.
	Maul Roads	Grade Rip Grade Rip Grade Rip Place GM Rip Place GM Rip Place GM	Sent W Hau I Rd Sent W Hau I Rd Sent E Ramp Sent E Ramp North 470 Hau Rd North 470 Hau Rd North 470 Hau Rd North 470 Hau Rd South 470 Hau Rd South 470 Hau Rd South 470 Hau Rd South 470 Hau Rd	14 14 15 15 16 16 16 17 17 17	D10 D10 D10 D10 D10 D10 D10 D10 E27 D10 D10 E27 D10	220 220 220 220 220 220 220 115 220 220 115 220 220 220 220 220 220 220 220 220 22	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50	375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pet boundary pit boundary Dump C Dump C north	Clid over plant area as needed Grade berm from west to east, finish above grade creating northerly draina sope. Use north extent of road as much for berm around pit to retention be no for reverging. Grade south portion of mad fowerds dump, extending toe of Dump C into a not reverse to soid, reduce slopes as much as possible. Cannot achieve no for reverging or reverging to the control of the dump. The with slope. Gradeling road east toward the dump. The with slope.
	Maul Roada	Grade Rip Grade Rip Grade Rip Place GM Grade Rip Piace GM Grade	Sent W Hau! Rd Sent W Hau! Rd Sent E Ramp Sent E Ramp Sent E Ramp Sent E Ramp Noth GTO Hau! Rd South GTO Hau! Rd	14 14 15 15 16 16 16 17 17 17	D10 D10 D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50	270 375 375 375 375 375 375 375 3	12 12 County Rd County Rd pit pit	13 13 pet boundary pit boundary Dump C Dump C north	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stock. Use north extent of road as much for bern mound pit to reterrior be not reverse. Grade south portion of road towers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers of the reverse of the reverse of the reverse of the reverse of the road road road road road road road road
	Maul Roads	Grade Rip Grade Rip Grade Rip Grade Rip Place GM Grade Rip Place GM Rip Place GM Rip Place GM Rip Rip Rip Grade Rip	Sent W Hau I Rd Sent W Hau I Rd Sent W Hau I Rd Sent E Ramp Sent E Ramp Noth GTO Neu Rd Noth GTO Neu Rd Noth GTO Neu Rd Noth GTO Neu Rd South GTO Neu Rd South GTO Neu Rd GTO Ne	14 14 15 15 16 16 16 17 17 17 18 19	D10 D10 D10 D10 D10 D10 D10 D10 E27 D10 D10 S27 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50	375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pet boundary pit boundary Dump C Dump C north	Clid over plant area as needed Grade berm from west to east, finish above grade creating northerly draina sope. Use north extent of road as much for berm around pit to retention be no for reverging. Grade south portion of mad fowerds dump, extending toe of Dump C into a not reverse to soid, reduce slopes as much as possible. Cannot achieve no for reverging or reverging to the control of the dump. The with slope. Gradeling road east toward the dump. The with slope.
	Haul Roada	Grade Rip Grade Rip Grade Rip Place GM Grade Rip Piace GM Grade	Sent W Hau! Rd Sent W Hau! Rd Sent E Ramp Sent E Ramp Sent E Ramp Sent E Ramp Noth GTO Hau! Rd South GTO Hau! Rd	14 14 15 15 16 16 16 17 17 17	D10 D10 D10 D10 D10 D10 D10 D27 D10 D10 D27 D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50	270 375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C north	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stock. Use north extent of road as much for bern mound pit to reterrior be not reverse. Grade south portion of road towers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers dump, extending toe of Dump C into a road rowers of the reverse of the reverse of the reverse of the reverse of the road road road road road road road road
	Maul Roada	Grade Rip Grade Rip Grade Rip Grade Rip Place GM Grade Rip Rip Grade Rip Place GM Grade Rip Place GM Rip	Sent W Haul Rd Sent W Haul Rd Sent E Ramp Sent E Ramp Sent E Ramp North GTO Haul Rd North GTO Haul Rd North GTO Haul Rd South GTO Haul Rd South GTO Haul Rd South GTO Haul Rd OTO Haul Rd OTO Haul Rd South GTO Haul Rd OTO Haul Rd OTO Ramp in Pit Phase II Haul Phase II Haul Water Stand to Primary Water Stand to Primary Water Stand to Primary	14 14 15 15 16 16 16 17 17 17 18 19 19 19 19 20 20	D10 D10 D10 D10 D10 D10 D10 E27 D10 E27 D10 D10 D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 210 115 220 220 220 220 220 220 220 220 220 22	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C north	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains slope. Use noth extent of road as much for berm around pit to reterrition be not revenue for the read of the plant of the rest of the reterrition of the rest of the
	Haul Roada	Grade Rip Grade Rip Rip Grade Rip Place GM Grade Rip Place GM Rip Grade Rip Grade Rip Grade Rip Flace GM Rip Grade Rip Rip Flace GM Rip Rip Flace GM Rip	Sent W Hau! Rd Sent W Hau! Rd Sent W Hau Rd Sent E Ramp Sent R Ramp Sent R Ramp Sent R Ramp Sent R Ramp Noth R R Ramp Sent R R Ramp Sent R R R R R R R R R R R R R R R R R R R	14 14 15 15 16 16 16 17 17 17 17 17 18 19 19 20 20	D10 D10 D10 D10 D10 D10 D10 E27 D10 D10 E27 D10 D10 E27 D10 D10 E27 D10 D10 E27	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pit boundary pit boundary Dump C Dump C north	Clid over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stock. Use north extent of road as much for bern around pit to reterring the road road towards dump, extending toe of Dump. C into a road road towards dump, extending toe of Dump. C into a road road road road road road road r
	Maul Roada	Grade Rip Grade Rip Grade Rip Grade Rip Grade Rip Place GM Crade Rip Place GM Rip Place GM Rip Grade Rip Grade Rip Grade Rip Grade Rip Place GM Grade Rip Place GM Grade Rip Grade Rip Grade	Sent W Hau/ Rd Sent W Hau/ Rd Sent W Hau/ Rd Sent B Ramp Sent E Ramp North GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd Phase II Hau/ Water Stand to Primary	14 14 15 15 16 16 17 17 17 18 19 19 19 20 20 20 21	D10 D10 D10 D10 D10 D10 D10 D10 D27 D10 D10 D10 D10 D10 D10 D10 D10 D10 D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 55 55 55 55 55 55 55 55 55 55 55 55 5	270 375 375 375 375 375 375 375 375 375 375	12 12 County Rd County Rd pit pit	13 13 pel boundary pel boundary Dump C Dump C north	Cliff over plant area as needed Gode beam from west to east, firsth above grade creating northerly drains alone the month extent of road as much for beam enough pit to reterition be right for the property of the property
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	Maul Roada	Grade Rip Grade Rip Grade Rip Grade Rip Rip Grade Rip Rip Grade Rip Place GM Grade Rip Grade	Sent W Hau Rd Sent W Hau Rd Sent R Hamp Sent E Ramp Sent E Ramp Noth GTO Hau Rd Noth GTO Hau Rd Noth GTO Hau Rd Noth GTO Hau Rd South GTO Hau Rd South GTO Hau Rd South GTO Hau Rd OTO Hau Rd South GTO Hau Rd OTO Hau Rd South GTO Hau Rd Water Stand to Primary Water Stand to Brimary Water Stand to Br	14 14 15 15 16 16 16 16 17 17 17 17 19 19 20 20 20 20 21 21 21 22	D10	220 220 220 220 220 220 220 220 220 215 115 220 220 220 220 220 220 220 220 220 22	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 375 376 377 376 377 377 377 377 377 377 377	12 12 County Rd County Rd pit pit	13 13 pel boundary pel boundary Dump C Dump C north	Cliff over plant area as needed Gode beam from west to east, firsth above grade creating northerly drains alone the month extent of road as much for beam enough pit to reterition be right for the property of the property
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	Maul Roada	Grade Rip Grade Rip Grade Rip Grade Rip Grade Rip Rip Grade Rip	Sent W Hau/ Rd Sent W Hau/ Rd Sent W Hau/ Rd Sent B Ramp North GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd	14 14 15 15 16 16 16 17 17 17 18 19 19 20 20 22 21 21 22 22 22 23	D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 375 375 375 375 377 377 377 377	12 12 County Rd County Rd pit pit	13 13 pel boundary pel boundary Dump C Dump C north	Cliff over plant area as needed Gode born from west to east. Brisish above grade creating northerly drains and born from west to east. Brisish above grade creating northerly drains are for tree. Gode south portion of road as much for form moved pill to reterificate be reformed to the form of the creation of the creating of the creation of the creation of the creation of the creating of the creation of the cre
	Haul Roads	Grade Rip Grade Rip Grade Rip Grade Rip Rica GM Grade Grade Rip Place GM Grade Grade Grade Rip Rip Rica GM Grade Rip Rip Rica GM Grade Rip Rip Rica GM Grade Rip Rica GM Grade Rip Rica GM Grade Rip Rica GM Grade Rip Rica GM	Sent W Hau/ Rd Sent W Hau/ Rd Sent W Hau/ Rd Sent B Ramp North GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd South GTO Hau/ Rd	14 14 15 15 16 16 16 16 17 17 17 18 19 19 20 20 20 21 21 22 22 22	D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 376 377 377 377 377 377 377 377 377 377	12 12 County Rd County Rd pit pit	13 13 pel boundary pel boundary Dump C Dump C north	Old over plant area as needed Grade berm from west to east, finish above grade creating northerly drains stope. Use north extent of role as much for berm around pit to reterrition be not revenue for the read of the plant of the rest of the plant of th
	Maul Roada	Grade Rip Grade Rip Grade Rip Grade Rip	Sent W Hau Rd Sent W Hau Rd Sent W Hau Rd Sent E Ramp Sent E Ramp Sent E Ramp Sent E Ramp Noth GTO Hau Rd Noth GTO Hau Rd Noth GTO Hau Rd South GTO Hau Rd Water Stand to Phramp Water Stand to Phramp Water Stand to Phramp Phase II Hau Phase II Hau Phase II hower family Nothing Sent Control Phase I to water stand inferenceion Phramp I to hau Generacion	14 15 15 16 16 16 17 17 17 18 19 19 20 20 22 1 21 22 22 23	D10	220 220 220 220 220 220 220 220 220 220	105 105 105 105 105 105 105 105 105 105	50 50 50 50 50 50 50 50 50 50 50 50 50 5	270 375 375 375 375 375 375 377 377 377 377	12 12 County Rd County Rd pit pit	13 13 put boundary port boundary put boundary Dump C Dump C north	Cliff over plant area as needed Gode born from west to east. Brisish above grade creating northerly drains and born from west to east. Brisish above grade creating northerly drains are for tree. Gode south portion of road as much for form moved pill to reterificate be reformed to the form of the creation of the creating of the creation of the creation of the creation of the creating of the creation of the cre

